Remarks

Reconsideration and allowance of this application, as amended, are respectfully requested.

Claims 1, 4, 15, and 17 have been amended. New independent claim 26 has been added. Claims 1 and 4-26 are now pending in the application. Claims 1, 17, 23, and 26 are independent. The rejections are respectfully submitted to be obviated in view of the amendments and remarks presented herein. No new matter has been introduced through the foregoing amendments.

Applicant acknowledges with gratitude the indication that claims 4, 10, and 15 contain allowable subject matter. Accordingly, certain of the claims have been amended solely to expedite allowance of the application. Claim 1 has been amended to incorporate the features of the invention previously recited in claim 4. Instant claim 1 defines an embodiment of the invention that includes the feature of "the return ink being diverted through a bypass line that departs from the return line and connects to the feed line of the squeegee device." (For the reasons outlined below, previously presented claim 4 has been amended to depend from new independent process claim 26.) Claim 15 has been amended to depend from claim 1. Accordingly, all of pending process claims 1 and 5-16 should be allowable.

Independent apparatus claim 17 has been amended in a manner that parallels the amendment of claim 1. Instant claim 17 defines a device that includes "a second bypass line configured to

controllably divert from an ink return line that removes the ink from the squeegee device a portion of the return ink, *the second bypass line departing from the return line and connecting to the feed line of the squeegee device.*" Accordingly, all of pending apparatus claims 17-22 should be allowable.

New claim 26 has been added to further define the scope of protection sought for Applicant's invention. Claim 26 defines an embodiment of the invention that is a combination of the features of previously presented claim 1 and one of the features previously presented in claim 5. Claim 26 defines a process that includes in pertinent part the feature of "regulating flow with a throughflow regulating valve provided in the bypass line."

Entry of each of the amendments is respectfully requested.

35 U.S.C. § 103(a) - Heller and Switall

Claims 1, 5-9, 12-14, 16-18, and 20-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US 2003/0084805 A1 of Heller et al. (hereinafter "Heller") in view of U.S. Patent No. 4,643,124 to Switall.

For the reasons outlined above in the introductory remarks, the rejection of claims 1, 5-9, 12-14, 16-18, and 20-22 under § 103(a) based on Heller and Switall is respectfully deemed to be obviated.

Based on the examiner's indication of allowable subject matter, claim 1 has been amended to incorporate the features of the invention previously recited in claim 4. Instant claim 1 defines an embodiment of the invention that includes the feature of "the return ink being diverted through a bypass line that departs from the return line and connects to the feed line of the squeegee device." Claims 5-10 and 12-16 all depend, either directly or indirectly, from claim 1, and are, therefore, also allowable. The separate rejection of claim 11 is similarly deemed to be obviated.

Independent apparatus claim 17 has been amended in a manner that parallels the amendment of claim 1. Instant claim 17 defines a device that includes "a second bypass line configured to controllably divert from an ink return line that removes the ink from the squeegee device a portion of the return ink, *the second bypass line departing from the return line and connecting to the feed line of the squeegee device.*" The combined disclosures of Heller and Switall do not teach each feature of instant claim 17. Claims 18 and 20-22 all depend, either directly or indirectly, from claim 17, and are, therefore, also allowable. The separate rejection of claim 19 is similarly deemed to be obviated.

35 U.S.C. § 103(a) - Heller, Switall, and Achelpohl

Claims 23-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Heller in view of Switall and U.S. Patent No. 5,816,163 to Achelpohl.

The rejection of claims 23-25 under § 103(a) based on Heller, Switall, and Achelpohl is respectfully traversed. For at least the following reasons, the combined disclosures of Heller, Switall, and Achelpohl would not have rendered obvious Applicant's claimed invention.

First, the combined disclosures of Heller, Switall, and Achelpohl do not teach all of Applicant's claim features. The examiner has indicated that previously presented claim 4 contains allowable subject matter. More specifically, the examiner states that "the prior art of record does not teach or render obvious a process for supplying printing ink having supply and return pumps, *wherein return ink is diverted through a bypass line that departs from the return line and connects to the feed line of the squeegee device*" (Office Action page 14).

Previously presented claim 23 defines a device that includes in pertinent part the feature of "a second bypass line configured to controllably divert from an ink return line that removes the ink from the squeegee device a portion of the return ink, *the second bypass line departing from the return line on a discharge side of the ink return chamber and communicating the diverted return ink to the ink feed line at a location between the first bypass line and the squeegee device.*" The combined disclosures of Heller, Switall, and Achelpohl do not teach, *inter alia*, the above-quoted claim feature.

Second, there is simply no teaching in any of Heller, Switall, and Achelpohl that would have led one to select the references and combine them in a way that would result in the device defined by Applicant's claim 23.

Therefore, the combined disclosures of Heller, Switall, and Achelpohl would not have rendered obvious the device defined by claim 23. Claims 24 and 25 are allowable because they depend from claim 23, and for other reasons.

New Independent Claim 26

New claim 26 has been added to further define the scope of protection sought for Applicant's invention. Previously presented claim 4 has been amended to depend from claim 26. Claims 4 and 26 are allowable for at least the following reasons.

In rejecting claim 5, the examiner stated that "[t]he combination of Heller and Switall also teaches regulating flow with a through flow regulating valve provided in at least one of the feed line (Switall: 40)" (Office Action page 4).

Previously presented claim 5, however, *also* defines other features of the claimed invention, i.e., "regulating flow with a throughflow regulating valve and/or a cutout valve provided in at least one of the feed line and the bypass line." That is, claim 5 contains at least four alternatives: a throughflow regulating valve in the feed line, a cutout valve in the feed line, a throughflow

regulating valve in the bypass line, and a cutout valve in the bypass line.

As indicated above, however, the examiner asserts that Switall teaches only one of Applicant's four configurations, i.e., a throughflow regulating valve in the feed line. The examiner does not address any of the other three possible configurations recited in Applicant's claim 5.

Claim 26, therefore, defines an embodiment of the invention that is a combination of the features of previously presented claim 1 and one of the features previously presented in claim 5. Claim 26 defines a process that includes in pertinent part the feature of "regulating flow with a throughflow regulating valve provided *in the bypass line*."

Switall most certainly does not disclose a throughflow regulating valve in the bypass line. Referring to Switall's sole drawing figure, Switall teaches a configuration having a valve 42 in a bypass line (i.e., "return conduit 44"). Valve 42, however, is "an adjustable *pressure responsive* valve" (Switall column 3, lines 15-16). This means that only a portion of the liquid will be guided through the bypass line 44 when a certain pressure in the line 38 (adjusted by the adjustable flow valve 40) is exceeded (see Switall column 4, lines 12-31).

The process defined by Applicant's claim 26 is different from that of Switall. Applicant's claimed process includes a closed ink chamber (including a squeegee blade carrier having a

longitudinally running trough, squeegee blades, and a form inking roller or an anilox roller). In contrast, Switall only discloses an open system in which a tray 18 is used. In Switall's ink system the discharge unit of the pump only pumps ink back to the vessel 30 when a certain ink level is exceeded.

However, in a closed system, the discharge unit of the pump always pumps ink - or the ink-air-mixture - back to the ink tank. The air is brought into the ink chamber by the anilox roller, because the anilox roller has cups to transport the ink to the ink supply roller. These cups, after the ink has been transferred to the next roller, are filled with air. Once the cups are filled with air, they again reach the ink chamber, fresh ink is filled into the cups, and the air remains in the ink chamber. The air must be removed from the ink chamber. The discharge pump units thus pump the ink-air-mixture out of the ink chamber.

As explained in the specification of the instant application, the volume that must be removed from the ink chamber is larger than the volume that must be pumped into the ink chamber. However, since the discharge unit and the supply unit have the same pumping rate, a bypass line must be introduced in the supply line. The bypass line has an adjustable throughflow regulating valve, which is different from a simple pressure responsive valve. By providing a throughflow regulating valve, the ink current is always divided into part of a fixed ratio, whereas Switall's pressure responsive valve only lets ink through when a certain pressure is

exceeded. Furthermore, when using Switall's open tray instead of a closed ink chamber, the pump's discharge unit pumps air as long as a certain ink level within the tray is not reached. This is not the case with Applicant's claimed process and its closed chamber. New claim 26, therefore, is also allowable.

In view of the foregoing, this application is now in condition for allowance. If the examiner believes that an interview might expedite prosecution, the examiner is invited to contact the undersigned.

Respectfully submitted,

JACOBSON HOLMAN PLLC

By: John C. Altmiller Reg No. 34,378
Harvey B. Jacobson, Jr.
for Reg. No. 20,851

400 Seventh Street, N.W.
Washington, D.C. 20004
Telephone: (202) 638-6666
Date: November 13, 2008